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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,702	08/05/2003	Robert Harold Bateman	DEH061	6783
7590 05/18/2005 DIEDERIKS & WHITELAW, PLC 12471 Dillingham Square #301 Woodbridge, VA 22192			EXAMINER GURZO, PAUL M	
			ART UNIT	PAPER NUMBER
			2881	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,702

Applicant(s)

BATEMAN ET AL.

Examiner

Paul Gurzo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-96 is/are pending in the application.
- 4a) Of the above claim(s) 2-8, 11-94 and 96 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 9, 10 and 95 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group 2 in the reply filed on 4/25/05 is acknowledged. The traversal is on the ground(s) that species are never drawn to claims and the velocity ranges are not mutually exclusive. This is not found persuasive because, while it is true that species are drawn to Figures, not claims, when an apparatus is claimed that includes different modes of operation and results, an election of species is deemed correct even if there is only one embodiment depicted in the drawings. Further, Applicant is correct in stating that the velocity ranges are not mutually exclusive and the 50 m/s covers both arrangements. However, the mode of operation of the ion trap is substantially different when the velocity is less than or equal to 50 m/s and when the velocity is zero. The energy within the trap is drastically different and the trapping means is drastically different because the ions will remain in the trap if they have zero velocity. Because there is such a fundamental difference in the working order of the two ion traps, the two traps operate in mutually exclusive ways.

In addition, Applicant's argument regarding the examination of claim 1 is persuasive. Therefore, claims 1, 9, 10, and 95 will be examined.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Zajfman et al.

(6,744,042).

Regarding claim 1, 917 teaches a mass spectrometer comprising an ion trap (1) comprising a plurality of electrodes (2A-2H and 3A-3H) wherein at a first time t1 ions enter said ion trap and wherein at a second later time t2 one or more axial trapping regions are formed or created along at least a portion of the length of said ion trap (col. 3, line 18 - col. 4, line 12 and Fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 10, and 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zajfman et al. (6,744,042) in view of Buttrill, Jr. et al. (5,569,917).

Regarding claims 9, 10, and 95, 042 teaches a mass spectrometer and method a mass spectrometry comprising an ion trap (1) comprising a plurality of electrodes (2A-2H and 3A-3H), wherein in use ions received within said ion trap are trapped in one or more axial trapping regions within said ion trap and wherein in a mode of operation said one or more axial trapping regions are translated along at least a portion of the axial length of said ion trap (col. 3, line 18 - col. 4, line 12 and Fig. 1). They teach that the storage of the ions in the ion trap should be as

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long as possible to perform measurements (col. 4, lines 13-14). In addition, they teach the first factor in ion storage is the ion velocities in the bunch, which can be adjusted according to any desired velocity (col. 2, lines 5-9 and col. 4, lines 64-67). Therefore, it is obvious that since the ion velocity is a parameter that can be adjusted and the ions have a slower velocity (obviously present to ensure that they remain in the trap for longer periods), thereby teaching on velocity reduction.

In addition to 042 that obviously but does not explicitly teach progressive velocity reduction, 917 teaches ions in an ion trap are compressed in physical space and the velocity is reduced. The velocity will continue to be reduced through every collision between the ions and the buffer gas (col. 1, lines 36-45). Therefore, it is obvious that the velocity will be less than or equal to 50 m/s because the ions can collide with the buffer gas as many times as necessary. The combination of the buffer gas collisions in 917 and the velocity parameter adjustment ability in 042 teach on the claimed velocity value. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reduce ion velocity because a spatially compressed ion cloud having relatively low velocity ions is much better suited to mass analysis than an ion beam dispersed over a much larger volume.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Gurzo whose telephone number is (571) 272-2472. The examiner can normally be reached on M-Fri. 7:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached at (571) 272-2477. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PMG


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800